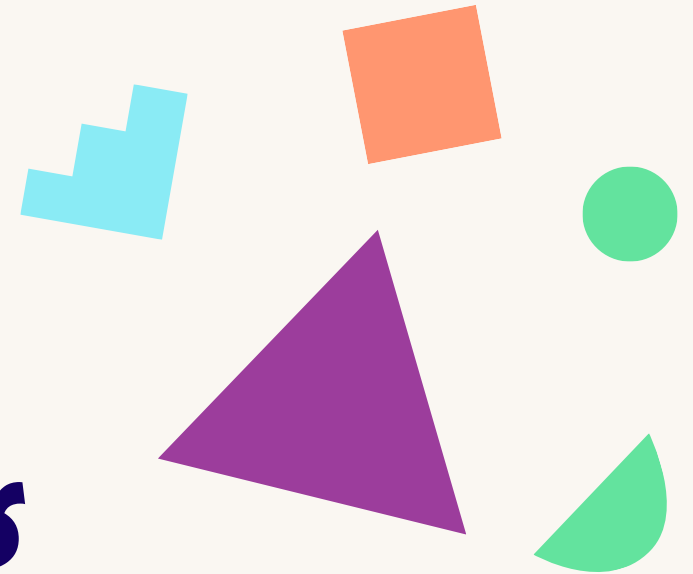


Teacher notes

# Problem Solving

Free resource



## About this resource

The Shape Your Skills Award is an accredited skills development award for ages 7-11. It helps children build essential skills for life and learning.

Through practical activities, the award develops children's skills in communication, organisation and problem-solving, growing their self-confidence and teamwork abilities. The award culminates in a final group task where children combine their skills to take on a 'leadership challenge' in your school.

This resource has been designed to give you a taster of the award. It includes two of over thirty practical play-based activities. Try it out with your class today!

# How to use this document

These teacher notes support the learner presentations on the Shape Your Skills Award website. The online presentations are designed to be shared with learners through your digital whiteboard or projector.

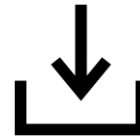
We suggest displaying these notes for yourself on a separate device if you have one available, or printing them so they are easily accessible.

**Purple buttons will take you directly to the learner presentations:**

[Click to present](#)

**Top tip:** Right click the button to open in new tab or window.

**Use the tools in your web browser to save or print this document:**



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# Introduction

## Format

In this skill block we're going to focus on problem solving. Begin with this introductory session to help learners focus on problem solving; what it is, why being able to do it is important for a leader and for life, and the steps that need to happen to make it an effective process. Then choose which activities you'll deliver to support the development of your learners' problem solving skills. Complete this skill block by using the short review session provided.

## Links to learning

We'd encourage you to highlight to learners the importance and relevance of problem solving to them as learners across their whole schooling. Being aware of strategies they can use and having the confidence to tackle problems that might occur will be important features of their future success. So it may be beneficial to tie this work into any other problem solving, resilience or growth mindset activities you might be covering in or out of curriculum time.

## Links to leading

Although the problem solving activities you select may not require learners to take on a leadership role at this stage, it's a good idea to take advantage of opportunities to reinforce the importance of being able to solve problems when they are a leader. As one of their key leadership role models, you might like to share examples of when you have been faced with problems to overcome, strategies you use to mitigate risks and steps you've taken to solve problems, so that learners can get a flavour of this skill in real-life leadership settings.

## Delivery method

In the introduction there are suggested discussion questions and desk-based activities that learners can participate in. As with all activities in the award, it's entirely up to you what you choose to deliver and in what way, so that it best suits the needs and wants of your learners and circumstances.

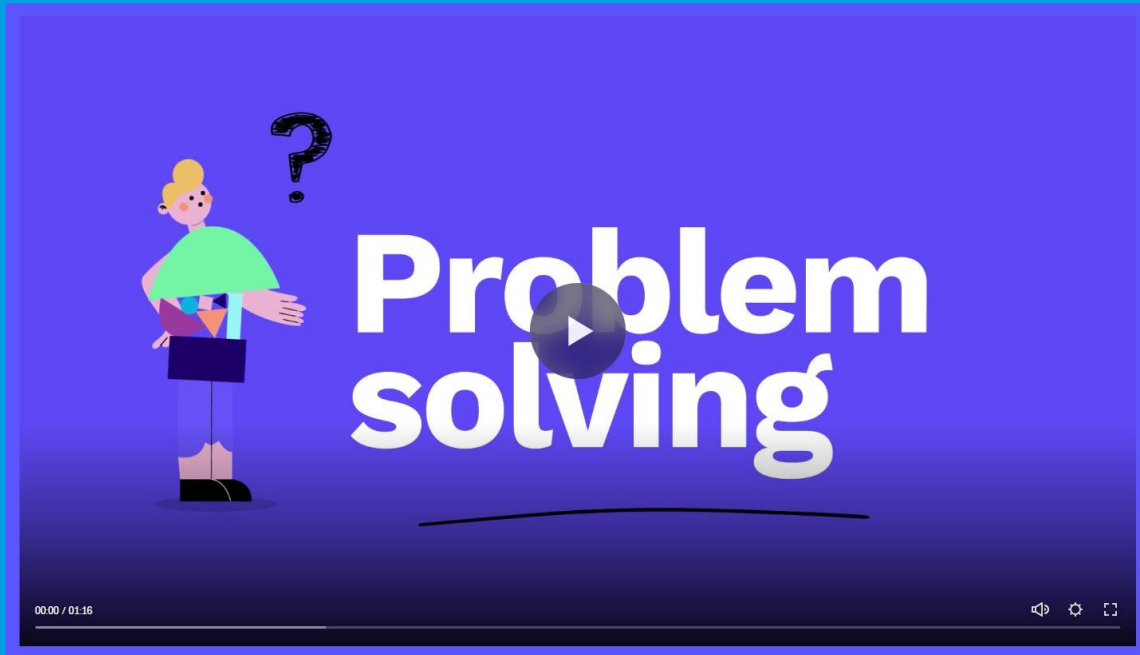


**Problem solving**

# Introduce the skill

Start with this learner  
presentation and tasks

[Click to present](#)



**Information to share**

This is an introductory video to the skill of problem solving. Play the video to kick off the session.

## What is problem solving?

**Problem solving** is the process you go through to find a solution to the problem you are having.



### Information to share

As the name suggests, problem solving is the act of understanding that there is a problem and trying to find solutions. It can be quite a tricky skill, so we break it down into IdeAL – with each letter representing one step in the problem solving process.

### Questions to ask/prompts

Discuss why being able to solve problems in life might be a useful skill to have. Can learners think of any problems they have had to solve today/this week/ ever? e.g.

- Lost your coat or jumper
- A disagreement in the playground
- Choosing what to spend your pocket money on
- Running out of time to finish your homework

Share with their partner/group: what was it, what did they do, what happened in the end?

### Key takeaways

Leaders are always solving problems – sometimes in advance, through their planning and sometimes dynamically when things crop up unexpectedly. Problem solving is a key skill for life, leading and learning. By breaking it down into different aspects, it can make it easier to do.

task - Learner task - Learner task - Learner task - Learner task - Learner task - Learner task - Learner task

## Solutions, solutions, solutions!

Come up with as many possible solutions as you can think of to the imaginary scenarios below.

Once you've done that, put each of your ideas into order, from what you would be most likely to do to least likely to do.



### Scenario 1

You have taken on the role of playground leader. You notice someone damaging the equipment on purpose. What do you do?

### Scenario 2

You have been asked to share some work in assembly but are really nervous. What can you do?

### Scenario 3

You are working in a group and notice not everyone has a chance to speak. What would you do?

### Scenario 4

You are helping monitor food waste as part of a small team of leaders. You don't really understand what you should be doing. What could you do?

### Information to share

Following on from the last slide there are some optional imaginary problems you can give to learners. Their challenge is to list as many possible solutions as they can.

You can come up with your own problems that are relevant to your learners and setting.

### Questions to ask/prompts

Encourage learners to discuss their solutions.

- What would they do in each scenario and why?
- Which solutions are the most likely to try first?

### Key takeaways

Often a problem will have more than one solution so the trick is selecting the one you think will be best for you, the circumstances and the hoped for outcomes. Sometimes other people might make a different choice, and if you're working in a team or group with them, you'll need to use your teamworking skills to decide which way to go!

## Using the IdEAL method to solve problems



### Identify

Spot when a problem exists.



### Explore

Think about possible solutions and make a plan,



### Action

Follow the plan to achieve your goal.



### Look Back

Think about what worked and what didn't.

### Information to share

The Id in 'IdEAL' stands for 'identify' and tells us that our first job is to spot when a problem exists.

Sometimes the fact there's a problem is really easy to see, but sometimes it isn't quite so obvious.

### Questions to ask/prompts

You will want to help learners understand why it is important to identify the problem.

As part of this learners will need to understand:

- What is the real problem?
- Why is it a problem?

### Key takeaways

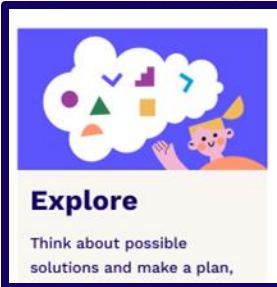
Leaders will try to stop any major problems occurring through their planning and preparation before they lead, but despite our efforts, sometimes problems still arise. If we don't know a problem is there, we don't know that it needs solving! Being able to see when something isn't going as well as we'd have liked and knowing we need to do something to change it is a really important skill for being an effective leader and in life generally.

## Using the IdEAL method to solve problems



### Identify

Spot when a problem exists.



### Explore

Think about possible solutions and make a plan,



### Action

Follow the plan to achieve your goal.



### Look Back

Think about what worked and what didn't.

### Information to share

The next step is to explore the various options open to them. It's impossible to give 'answers' for everything that could crop up. Instead, practicing taking some basic action that's relevant in every situation will be really useful. This includes:

- Stopping to consider what's happening
- Taking a step back (metaphorically or sometimes literally) to try to see the bigger picture
- Discussing with other people to get their thoughts and opinions
- Trying various solutions to see which feel right/make a positive difference
- Breaking the problem down into manageable parts.

### Questions to ask/prompts

Learners could discuss how or why each of the strategies identified above might be a useful tool in their problem solving toolkit. For example, why might discussing a problem with others be a useful thing to do?

### Key takeaways

A key thing to bear in mind when you're exploring solutions to a problem is to not give up and particularly to not give up before you've really tried. Sometimes a problem can seem insurmountable, but by stopping, taking a step back, asking for help and being open to trying different strategies, hopefully a workable solution will emerge.

## Using the IdEAL method to solve problems



### Identify

Spot when a problem exists.



### Explore

Think about possible solutions and make a plan,



### Action

Follow the plan to achieve your goal.



### Look Back

Think about what worked and what didn't.

### Information to share

Once learners have decided what they're going to do to solve the problem, they can put it into practice!

One of the good things about exploring the various options available to them is that, should their selected action not generate the results they'd hoped for, they might well have other options available and ready for them to try.

### Questions to ask/prompts

Learners could discuss the pros and cons of involving others in the problem solving process. What do you do if your chosen solution doesn't work as you'd hoped?

How might 'perseverance' be needed when you are problem solving?

Can you think of times you have had to persevere when things didn't go as well as you'd hoped?

### Key takeaways

Resilience is a big word, but at its most basic it means not giving up when something is difficult or doesn't go as planned. It's really closely linked to problem solving – and this might be a nice time to discuss and reinforce its importance – as if learners have a few possible solutions up their sleeve and the confidence to give them a go, they will demonstrate an important aspect of resilience.

## Using the IdEAL method to solve problems



### Identify

Spot when a problem exists.



### Explore

Think about possible solutions and make a plan,



### Action

Follow the plan to achieve your goal.



### Look Back

Think about what worked and what didn't.

### Information to share

The final stage in the problem solving process is to look back and see what worked well, what didn't go so well and what learners might change for next time.

This stage has two elements to it:

A reflection on the problem solving process itself and a reflection on the effectiveness of the solution that was actioned.

By reflecting on both of these elements, learners will be able to improve both the way they approach and carry out problem solving and also the effectiveness and success of the end result.

### Questions to ask/prompts

Why will it be important to reflect back to see what worked and what didn't?

Learners could discuss a time they have problem solved (maybe the problem they identified earlier) and think about what they did well, anything that wasn't so good, and anything they might do differently in the future.

### Key takeaways

Being able to reflect on successes and failures so that they can be replicated or avoided in future is a really fundamental skill. If learners have some simple strategies they can use and are comfortable with the concept and process, this will stand them in good stead for the future.

Learners will further explore (or have explored) the plan-do-review cycle in other skill blocks of this course, but it might be appropriate to reinforce the importance of reflection as a tool for improvement generally.



<b>Information to share</b>	Learners are now going to get the chance to try out their problem solving leadership skill in various practical activities.
<b>Questions to ask/prompts</b>	At the end of each activity, remember to discuss with learners so they understand: <ul style="list-style-type: none"><li>- What the activity taught them about problem solving.</li><li>- How that's relevant to them as a leader.</li><li>- How they will use this learning when they are leading.</li></ul>
<b>Key takeaways</b>	See each individual activity for specific review information to maximise the effectiveness of each activity.

## Problem solving

# Activities

Run three (or more) of these activities to put this skill into practice!

[View activities](#)

# Activities – how they work

This free resource contains two activities from over thirty. All activities are designed to be flexible, so you can pick the ones you think will work best with your group and setting. Step by step instructions for each activity are included on the following pages. There are also presentation slides for each of the activities that you can share with your learners before and after you run the activities.

## Activity: Tallest giraffe

### Objective

- We all know the giraffe is the tallest animal in the world – the tallest ever stood at almost 20 meters!
- Your task is to work as a team to build the tallest free-standing giraffe possible.
- You'll have to make a plan, thinking about the problems you might face along the way, and try to solve any issues that occur during the building process.



### Instructions

- 1/ In your group, you must build the tallest free-standing giraffe, using only the materials provided.
- 2/ Your giraffe must not be stuck to or leaning against anything for support. It must stay upright for 10 seconds while it is measured.
- 3/ You will have five minutes to plan with your group before you start to build, and you'll also get some review time at the end to reflect on the success of your planning, building and problem solving skills.

Ready?

Steady?

GO!



### Well done!

To complete this challenge:

- consider what problems you might face when building your giraffe.
- make a plan that minimised these risks.
- carry out your plan, dealing with any problems that cropped up during the process.

Activity

# Human knot

The aim is to untangle the ‘knot’ so that the group are in a circle, holding hands with the person either side of them. Note that some people may end up facing in and others out.

**1. Learners stand in a circle facing in.** Everyone puts their right hand out and takes hold of the right hand of another person (not a person directly to either side of them). Then do the same with their left hands but they must take hold of a different person’s left hand. The human knot is now tied.

**2. Learners must untangle the human knot** without letting go of any of the hands. Learners should end up in a circle again (some may end up facing in and others out).

### 3. Support / extension

To simplify the task: Allow learners to talk freely to one another; permit one or two learners to step out and guide the group from the outside; or reduce the group size so the knot is easier to solve.

To increase the challenge: Make it a timed race between groups; require the group to complete the task in silence; allow only one designated speaker; or have all learners attempt the task with their eyes closed.

### Reflection questions:

- “What skills did you use to complete this activity?”
- “Was it best done at speed, under pressure or better done slowly and calmly?”
- “What have you learned about problem solving?”



Time:  
**10 min**



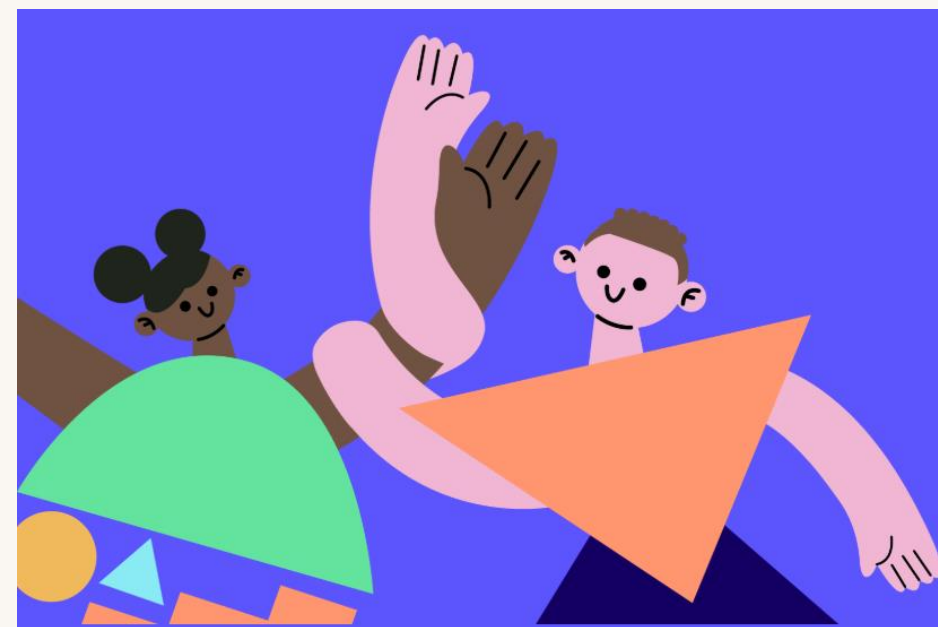
Space:  
Hall or classroom



Group size:  
**6-8**



Materials:  
None



**Activity**

# Tallest giraffe

This activity will focus on creating a plan to achieve a set task.

## Activity steps:

- 1/ Put your learners into groups.
- 2/ Challenge the groups to build the tallest free-standing giraffe, using only newspaper and sticky tape.
- 3/ The giraffe must not be stuck to or leaning against anything for support and must stay upright for 10 seconds while it is measured.
- 4/ Give groups 5 minutes to plan before they start to build. Set a time limit of approx. 10 minutes to complete the task before you measure the giraffes.
- 5/ Celebrate the winner!
- 6/ Take 5 minutes to discuss the reflection questions in groups.

## Reflection questions:

- How successfully did you problem solve during this activity?
- What is one thing you noticed, learnt or experienced during this activity that could help you solve problems as a leader?



**Time:**  
20 min



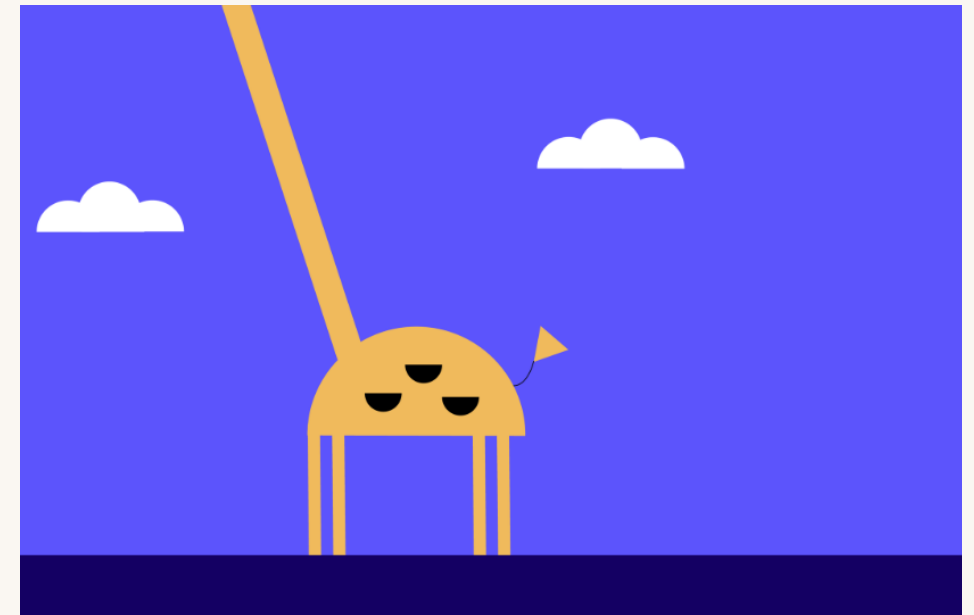
**Space:**  
Hall or classroom



**Group size:**  
2-6



**Materials:**  
Newspaper or paper, tape and a tape measure



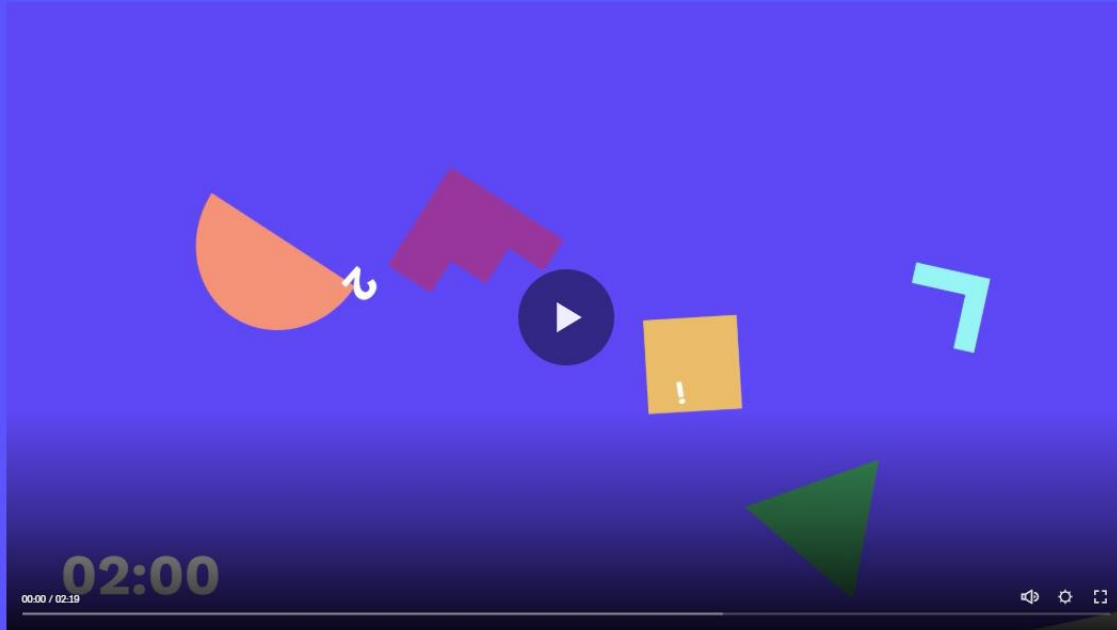
## Problem solving

# Reflection time

Learners review what they've learned with a guided reflection and tasks.

[Click to present](#)

## Reflection



### Information to share

Kick off the reflection session with a short mind map activity. You can play the video to give you a two minute countdown. Ask learners to jot down everything they can remember / what they learned from the problem solving block.

## Discuss

- Can you remember what problem solving activities you did?
- What do you feel you learnt about solving problems by doing these activities?
- How will the skill of problem solving help you with your learning at school?



### Information to share

Learners can discuss with a partner or small group what they have just been thinking about/noted down, including:

- What they have done during this skill block.
- What they have learnt about problem solving during this skill block.

You can then engage the whole group, asking for input and thoughts from everyone.

### Questions to ask/prompts

- Can you remember what problem solving activities you did?
- What do you feel you learnt about problem solving by doing these activities?
- How will being better at solving problems help you with your learning at school?

### Key takeaways

By the end of this section, all learners should be able to recall what they did and what they learnt during the problem solving skill block.

# Leadership Passport

Answer the questions on page 5



## Information to note

- In the full version of the award, after completing the activities and reflection, learners would now complete the 'problem solving' page in their Leadership Passport. They would then 'unlock' their problem solving shape, and be able to stick on the sticker in their passport.

## Questions to ask/prompts

- Learners will answer the questions:
- What problems did you solve in the activities you took part in?
  - How will problem solving skills help you in your life?
  - What does IdEAL stand for?

## Key takeaways

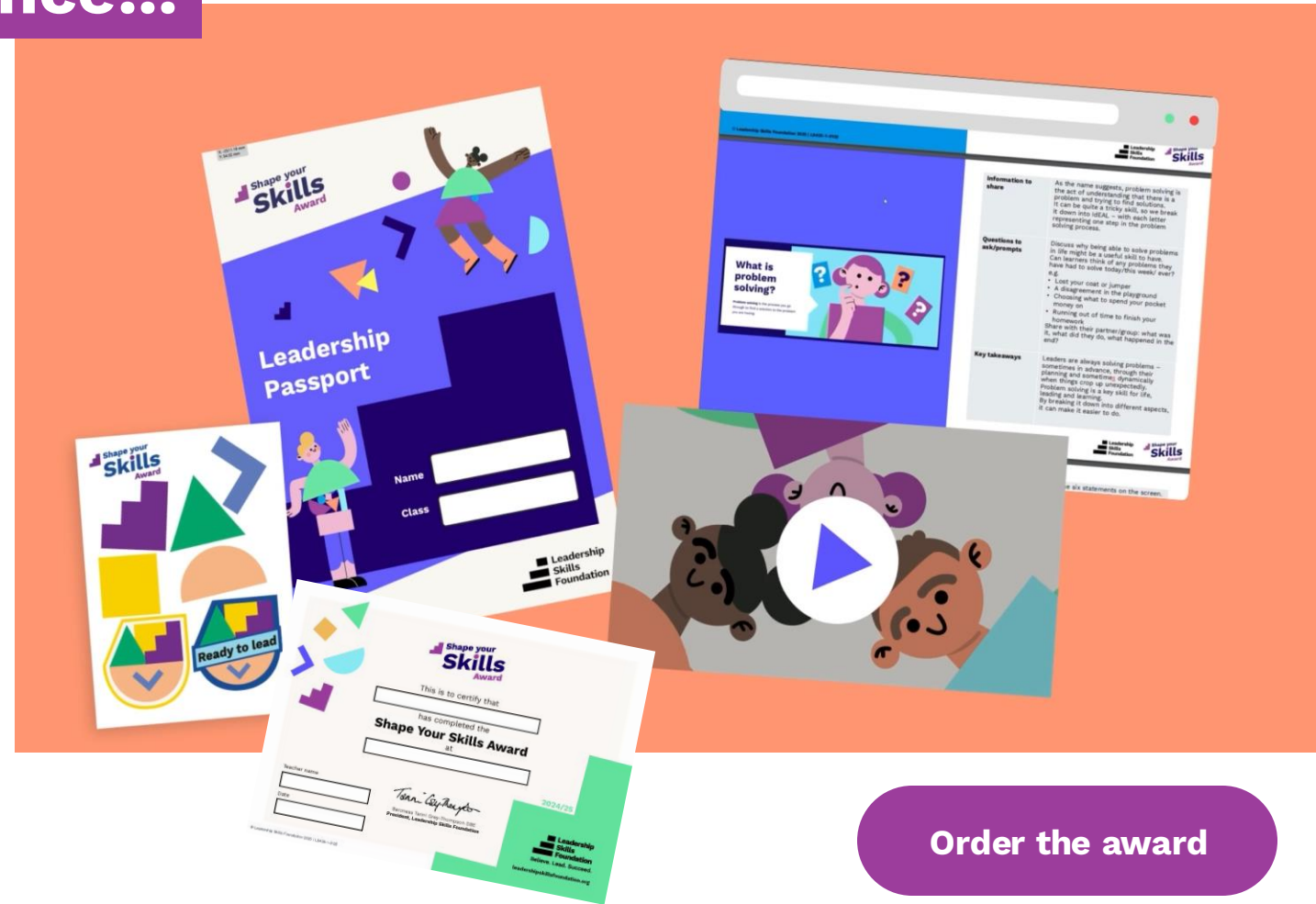
Once you are happy that a learner has completed this page in their Leadership Passport, you can present them with their 'problem solving' skill sticker, which they can stick onto the appropriate part of the page.

# Sign up for the full experience...

## The Shape Your Skills Award includes:

- 8 learning blocks focused on key skills and challenges
- Over 30 practical activities to suit different learners and spaces.
- Digital platform for learning resources, including presentations to use with learners, animations, and guided reflections.
- Printed leadership passports for each learner, with stickers to 'unlock' as they progress.
- Comprehensive teacher notes, so you can pick up and deliver with minimal preparation.
- Accredited award certificates for personal progress.

To find out more, visit [Shapeyourskills.org](https://Shapeyourskills.org) or email: [sysa@leadershipskillsfoundation.org](mailto:sysa@leadershipskillsfoundation.org)



Order the award